

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 September 2005 (15.09.2005)

PCT

(10) International Publication Number
WO 2005/084989 A1

(51) International Patent Classification⁷: **B60K 17/346**,
23/08

(21) International Application Number:
PCT/GB2005/000701

(22) International Filing Date: 25 February 2005 (25.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0404547.2 28 February 2004 (28.02.2004) GB

(71) Applicant (for all designated States except US): **KAM DIFFERENTIALS LIMITED** [GB/GB]; Clock Barn Farm, Hambledon Road, Godalming GU8 4AY (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **MASON, Kevin, Andrew** [GB/GB]; Clock Barn Farm, Hambledon Road, Godalming GU8 4AY (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

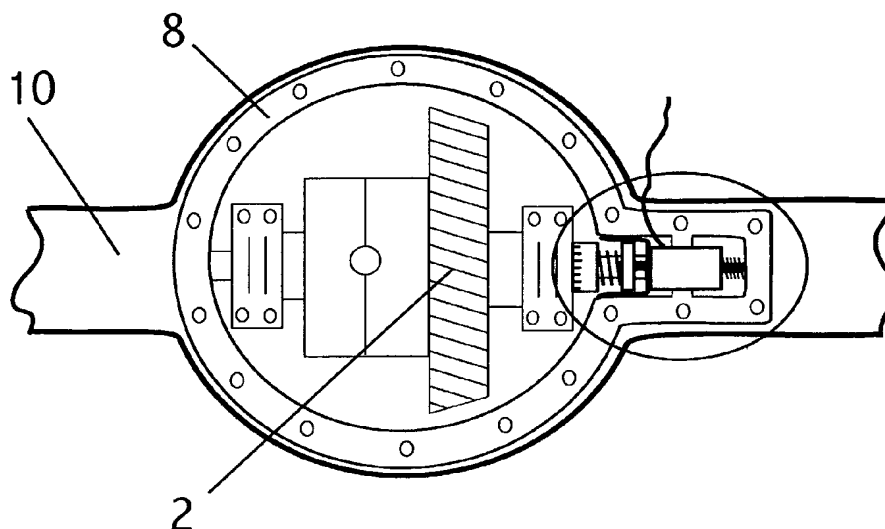
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DIFFERENTIAL LOCKING SYSTEM



(57) Abstract: A system of mounting differential locking devices onto a range of vehicles, be it new vehicles or retro fitting onto existing older vehicles, by means of mounting the locking assembly under a removable diff cover. A shaped mounting ring is fixed onto the rear of the axle assembly, in place of a conventional diff pan. A removable diff cover, which is sufficiently shaped or enlarged to accept the locking actuator, is fitted to the mounting ring, encasing the whole diff and diff locking assembly. A solenoid (or other mechanical actuator device) is mounted inside the shaped ring, parallel to the half shaft. The solenoid is connected to a fork, which in turn communicates reciprocal movement which engages/disengages a sliding dog gear into a splined bearing journal, press fitted into the diff carrier. This action causes the opposing half shafts to be locked together or independent as desired.

WO 2005/084989 A1